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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,289	11/01/2001	Michael Rys	MSFT-0766/191575.1	2147
41505 7590 09/28/2007 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER ROBINSON, GRETA LEE	
			ART UNIT 2168	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/001,289	Applicant(s) RYS ET AL.	
	Examiner Greta L. Robinson	Art Unit 2168	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-12, 14, 15, 17-23 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12, 14, 15, 17-23 and 25-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 29, 2007 has been entered.
2. Claims 1-5, 7-12, 14, 15, 17-23 and 25-32 are pending in the present application.
3. Claims 6, 13, 16 and 24 have been cancelled. Claims 1, 14 and 25 have been amended.

### ***Drawings***

4. The drawings are objected to because descriptive textual labels are requested for reference characters "14a" and "14b" for proper understanding of the drawing without having to reference the detailed description (see: Figure 1 and Figure 3). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an

Art Unit: 2168

amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

## **5. INFORMATION ON HOW TO EFFECT DRAWING CHANGES**

### **Replacement Drawing Sheets**

Drawing changes must be made by presenting replacement sheets which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments section, or remarks, section of the amendment paper. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). A replacement sheet must include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and within the top margin.

Art Unit: 2168

### **Annotated Drawing Sheets**

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheet(s) must be clearly labeled as "Annotated Sheet" and must be presented in the amendment or remarks section that explains the change(s) to the drawings.

### **Timing of Corrections**

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

### ***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claims are directed to an abstract idea and lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article/phenomenon) since it fails to produce a useful, concrete and tangible result. Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having real world value rather than a result that may be interpreted to

Art Unit: 2168

be abstract in nature as, for example, a thought, a computation, or manipulated data. More specifically, the claimed subject matter provides for identifying nodes within the hierarchical data, however there is no link between this concept and the other elements recited within the body of the claim to enable loading (or copying) of the **hierarchical data** into a first relational table. For example, claim 1 recites "storing the *data* from the node in a *record* in a first buffer ... *copying* the record from the first buffer to a relational table"; *however* the claim does not make clear that "the data" is "hierarchical data". Also, the claim omits specific limitation within the body of the claim "loading" operation.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2168

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-5, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. US Patent Application Publication No. 2002/0169788 in view of Garth et al. US Patent 5,873,091.

As per independent claim 1, Lee teaches:

identifying a first node within the hierarchical data corresponding to a first column in the relational table and second node associated with the first node corresponding to data to be stored in a row of the table corresponding to the first column [see paragraph 090-093 mapping process identifies location; also note paragraphs 0062, 96 and 0101]; storing the data from the first node in a record in a first buffer associated with the first relational table [paragraph 108]; identifying a third node within the hierarchical data corresponding to a first column in a second relational table and fourth node associated with the third node corresponding to data to be stored in a row of the second relational table [note mapping tables 36 paragraph 0101 and 0062]; storing the data from the third node in a record in a second buffer associated with the second relational table [note: Lee provides for multiple tables see "The loader can traverse the formed tree and update the relational database table(s)" paragraph 0062; Figure 1 elements 14, 20 and 22]; and copying the record from the first buffer to the first relational table and the record from the second buffer to the second relational table [paragraph 110, lines 4-6].

Lee teaches identifying a first node within the hierarchical data corresponding to a first column in the relational table and second node associated with the first node

corresponding to data to be stored in a row of the table corresponding to the first column, creating a record in a first buffer associated with the first relational table and copying the record from the first buffer to the first relational table at paragraph 96, 108, 110. Although Lee et al. teaches the invention substantially as cited, he does not explicitly state the loading entails copying the data. Garth et al. teaches executing various high level database commands such as a load and copy operation [note: abstract "storing the rows in a buffer, and copying the rows from the buffer to the data structure"; column 1 lines 1-29 "high level operations include "Load", "Image Copy", "Reorg", and "recover" operations"; column 4 lines 18-25 load processing unit 104]. It would have been obvious to one of ordinary skill at the time of the invention to have combined Garth et al. with Lee et al. because Garth teaches that such operations are well known high level database operations [note description of related art column 1 lines 15-45]. Garth et al. teaches that such operations re-load entail copying rows back into the table, a load process would be a copy.

As per claim 2 same as claim arguments above and Lee anticipates: wherein the relational table is part of a relational database at paragraph 99, lines 5-7; also see paragraph 0100 "the automatic loading of an XML document 12 into relational database 14".

As per claim 3 same as claim arguments above and Lee teaches: wherein the hierarchical data is XML data [note paragraph 96 and paragraph 0100 "XML document 12"].

As per claim 4 same as claim arguments above and Lee teaches:



wherein the hierarchical data is identified to correspond to a column in the relational table by way of a hierarchical schema [see paragraph 54 and 96].

As per claim 5 same as claim arguments above and Lee teaches:  
wherein the data is stored in the record of the buffer associated with first table is created after determining that the parent node of the first node within the hierarchical data is associated with the first relational table [paragraph 54, 110].

As per claim 11 same as claim arguments above and Lee anticipates:  
wherein the first buffer comprises a disk file at paragraph 110.

As per claim 12 same as claim arguments above and Lee anticipates:  
wherein the hierarchical data comprises an XML document at paragraph 96.

### ***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 14-15, 17-23 and 25-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. US Patent Application Publication No. 2002/0169788.

As per independent claims 14 and 25 Lee teaches:

receiving a schema describing a relationship of nodes in the hierarchical data to at least one column in each of the at least two different relational tables, mapping the hierarchical data to at least one column of the at least two different relational tables based on the schema and creating in at least two different files where each file is associated with one of at least two different relational tables records from the hierarchical data from nodes identified as data to be stored in the at least one column in each of the at least two different relational tables, and streaming the records into the at least two different relational tables by inserting the records from the file into the at least two different relational tables [note: paragraph 54-55, 83, and 99].

Lee teaches receiving a schema describing a relationship of nodes in the hierarchical data to at least one column in each of the at least two relational tables, mapping the hierarchical data based on the schema and creating records from the hierarchical data from nodes associated identified as data to be stored in the at least one column in each of the at least two relational tables and streaming the records into the at least two different relational tables by inserting the records from the at least two different files into the corresponding ones of the at least two different relational tables [see: paragraph 54-55, 83, and 99; "The loader can traverse the formed tree and update the relational database table(s)" paragraph 0062; Figure 1 elements 14, 20 and 22].

As per claims 15, 26-27 same as claim arguments above and Lee anticipates: further comprising creating a buffer for each of the at least two relational tables wherein the records are stored before being streamed into the at least two different relational tables at paragraph 110, lines 4-6.

As per claim 17 same as claim arguments above and Lee anticipates:  
wherein the hierarchical data is not size constrained at paragraph 83.

As per claims 18 and 28 same as claim arguments above and Lee anticipates: wherein  
the hierarchical data comprises an XML document at paragraph 96.

As per claims 19 and 29 same as claim arguments above and Lee anticipates:  
wherein the schema comprises an XML schema at paragraph 83.

As per claims 20 and 30 same as claim arguments above and Lee anticipates:  
wherein the at least two different tables have a relational relationship at paragraph 83,  
87.

As per claims 21 and 31 same as claim arguments above and Lee anticipates:  
wherein one of the at least one columns is a key field in one of the at least two different  
tables and foreign key in the other one of the at least two different tables, wherein the  
method further comprises populating records associated with the at least two different tables  
with the data associates with the one of the at least one columns at paragraph 54, 99.

As per claims 22 and 32 same as claim arguments above and Lee anticipates:  
further comprising streaming the record into the at least two different relational tables  
substantially in parallel at paragraph 110.

As per claim 23, wherein the schema is received by way of a network  
connection [note: paragraph 0005, paragraph 0095; Figure 1 system 10].

***Response to Arguments***

12. Applicant's arguments filed March 29, 2007 have been fully considered but they are not persuasive. In the response Applicant argued the major points: (1) Applicants have amended the claims to indicate that data in the hierarchical data source is associated with two different relational tables. Applicant states by way of "general understanding, some of the data from the hierarchical data source is stored in a first record associated with a first relational data prior to insertion into the corresponding relational table and some other of the data is stored in a second record associated with a second relational table". (2) Lee et al. does not teach mapping and streaming records as claimed.

In response to Applicants arguments the examiner respectfully maintains the rejection. Regarding argument (1), note new rejection cited under 35 USC 101 with respect to limitation hierarchical data. Also, Lee et al. teaches at least more than one table note depiction of table(s) element 20 Figure 1; also note abstract "the data is loaded into at least one table of the relational schema"; also "The loader can traverse the formed tree and update the relational database table(s)" paragraph 0062; paragraph 0096 "the XML document is loaded by the processing system 10 into the tables making up the first data storage portion"; also note paragraph 0109 creating tables. Applicant's argument that the reference fails to show certain features are not cited in independent claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). For example, claim 1 recites, a "method for loading

Art Unit: 2168

hierarchical data into a first relational table" [note: claim 1 preamble]. Support for this limitation can be found in Lee et al. paragraph 0003 "The invention relates to a method and system for automatically loading an extensible markup language (XML) document, as validated by a document-type definition (DTD), into a relational database". The step of "storing the data in a record in a first buffer to the relational table" can be found in Lee et al. at paragraph 0108 which states storing the DTD 18 into the DTM tables 90, 92 and 94 preferably comprises steps of creating and filling the DTDM-Item table 90 in the metadata tables. Also note paragraph 0101 and Figures 1-1B. Note the limitation "copying the record from the first buffer to the first relational table" can be interpreted by the loading of the XML documents into the relational schema paragraph 0110, however Garth et al. teaches "storing the rows in a buffer and copying the rows from the buffer to the data structure" note abstract, Figure 1, and column 5 line 42 through column 6 line 21. Regarding argument (2) The examiner has interpreted the meaning of "streaming records" as "loading " records as set out in the preamble of independent claims 14 and 25. Lee et al. teaches loading (i.e. streaming) the records see Figure 1 element loader (30), also note 0106. Lee also provides for mapping see paragraphs 56, 62 and 112"apply mapping rules".

### ***Conclusion***


13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lightstone et al. US Patent 6,088,705

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (571)272-4118. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Greta Robinson  
Primary Examiner  
September 21, 2007